

WECS-9520 software update tool

For immediate attention

Information to all owners and operators of Wärtsilä RT-flex and W-X 2 Stroke engines with WECS-9520 control system.

NOTE:

This Instructions Bulletin I-28 is linked to the Technical Bulletin RT-191 and the corresponding zip file for download (“WECS-9520_SW_update_02.zip”).

Concerned components

WECS-9520 control system of RT-flex and W-X engines.

Current situation

With the Technical Bulletin RT-191, “FCM-20 Hardware Revision 08”, Wärtsilä informs about the need to use the WECS-9520 Update Tool R02 to update the WECS-9520 software.

Solution

To ensure correct handling of the WECS-9520 software update procedure by the ship’s engineers, this Bulletin is provided together with the WECS-9520 update tool.

Note

This tool is working only on Windows XP and Windows 7 operating systems.

This Bulletin “Instructions I-28, Issue 5” supersedes “Instructions I-28, Issue 4”, dated January 23, 2017.

Reason: Technical Bulletin RT-191, Issue 1 is superseded by the Technical Bulletin RT-191, Issue 2.

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1 Introduction

This Bulletin is providing a step by step guidance to carry out the WECS-9520 software update as explained in the Technical Bulletin RT-191.

In particular, the procedures for installing and running the *WECS-9520 software update tool* are described and information on troubleshooting actions is provided.

The described work procedure is valid for all engines running with WECS-9520 engine control system.



WARNING:

Please ensure following conditions before the use of the software tool:

- The WECS-9520 software update tool shall only be used in port or other safe location.
- The WECS-9520 software update tool must only be run when the engine is in stand still condition.
- The flexView PC has to be connected to the Online spare FCM-20#00:
E90 shipyard interface box, terminals 79 and 80, see also document C in Table 1 or Appendix 4.
- The flexView PC is virus free. If in doubt, run an antivirus program first.

2 References

Table 1

	Document type	Document number	Description
A	Technical Bulletin	RT-191	WECS-9520 software update: Release 02
B	Wiring Diagram flexView Operator.pdf	107.368.149	Part of flexView-USB-Stick Contents for WECS-9520, see folder: C:\flexView-USB Stick Content\data

3 Required manpower

To perform the WECS-9520 software update procedure, **one person** is needed and it will take approximately **one hour**.

4 Preparations before installing and running the WECS-9520 software update tool

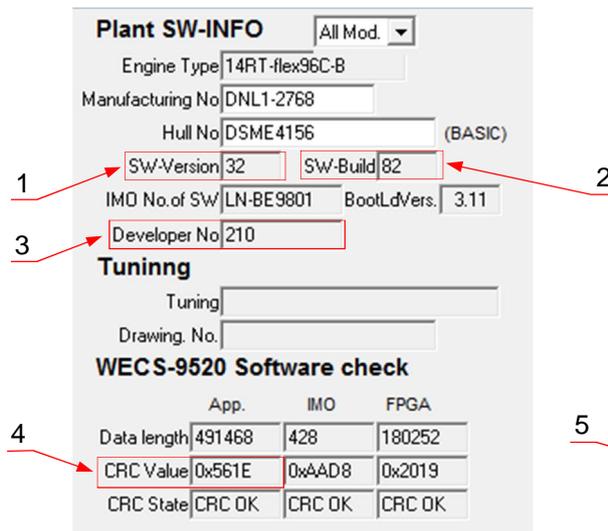
Make sure that at least one of the spare FCM-20 modules from the ship's stock is equipped with the software as used on the engine before the update. More precisely, the FCM-20 modules must be in good condition and the installation-specific WECS software must be copied before the WECS-9520 software update tool is started.

The instructions of how to install the WECS-9520 software by auto-download function to a spare FCM-20 module can be found in Appendix 2.

4.1 Check out the current application information

The current installation specific application CRC value can be checked through the operator interface of the flexView on the "Plant SW-INFO" page, see Figure 1.

Window before SW update tool is launched



Plant SW-INFO All Mod. ▾

Engine Type 14RT-flex96C-B

Manufacturing No DNL1-2768

Hull No DSME4156 (BASIC)

SW-Version 32 SW-Build 82

IMO No. of Sw LN-BE9801 BootLdVers. 3.11

Developer No 210

Tuning

Tuning

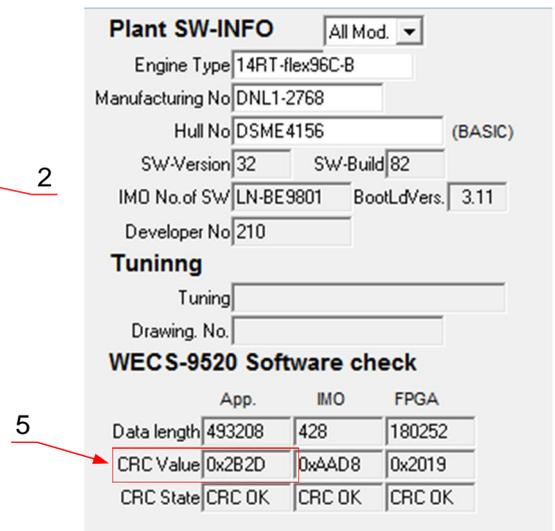
Drawing. No.

WECS-9520 Software check

	App.	IMO	FPGA
Data length	491468	428	180252
CRC Value	0x561E	0xA4D8	0x2019
CRC State	CRC OK	CRC OK	CRC OK

1. WECS-9520 software version
2. Software build number
3. Software developer number: is only shown with special access rights

Window after successful update



Plant SW-INFO All Mod. ▾

Engine Type 14RT-flex96C-B

Manufacturing No DNL1-2768

Hull No DSME4156 (BASIC)

SW-Version 32 SW-Build 82

IMO No. of Sw LN-BE9801 BootLdVers. 3.11

Developer No 210

Tuning

Tuning

Drawing. No.

WECS-9520 Software check

	App.	IMO	FPGA
Data length	493208	428	180252
CRC Value	0x2B2D	0xA4D8	0x2019
CRC State	CRC OK	CRC OK	CRC OK

4. Application CRC value before software update
5. Application CRC value after successful software update

Figure 1, Example of WECS-9520 software information on SW-Info card

The application CRC value (4) is displayed on the flexView PLANT SW-INFO page (see Figure 1). If the application CRC value (4) matches with the respective Software version and build (Table 2: "Column A and B"), a **software update is required**, i.e. follow the instructions as listed in Chapter 5.

NOTE:

If the displayed CRC value (see Figure 1) cannot be found in “Column A” or “Column B” of Table 2, the update can be omitted, i.e. the WECS-9520 software is up-to-date or does not apply to your plant’s software.

Table 2, Plant software information including the application CRC value

WECS-9520 software			Column A: Application CRC value before updating	Column B: Application CRC value after WECS update 01 (RT-153) only	Column C: Application CRC value after WECS update 02 (RT-191) only
Version	Build	* Dev. No.			
32	081	203	0xCC44	0x41CF	0x7A01
	082	210	0x561E	0x63C1	0x2B2D
	082	207	0xCA32	0x28C1	0xEB59
	083	220	0xB24F	0x4D1A	0x90CF
	084	234	-	0x8583	0x37BD
33	101	9221	0x34F5	0xB482	0x4A5F
	101	221	0x9E79	0x1FAC	-
	102	223	0x8DC2	0x628A	0x14B4
34	104	225	0xE9AF	0x8878	0xF4D5
	105	227	0xBD65	0xFDD7	0x1A34
	106	302	0x0F3E	0x0F4B	0xF941
	107	307	0xC2C4	0x443C	0x4EDE
	108	312	0x79C8	0x341C	0xBA49
	109	314	-	0xC216	0xA8A4
	110	317	-	0xE7BA	0x9167
111	319	-	0x19A5	0xC169	

* The “Developer No.” is not visualised in the operator mode.

After successful software update, the modified CRC value is displayed as shown in Figure 1, Position 5. The corresponding new CRC value is also listed in Table 2, “Column C”.

5 WECS-9520 software update



ATTENTION:

- Make sure that neither power supplies to WECS-9520 nor the flexView PC are disconnected during the update process.
- Both CAN bus lines to the WECS-9520 must be connected to the online spare FCM-20#0 module in the E90 box – shipyard interface box, terminals 79 and 80 – see also Appendix 4. No CAN-Bus failures must be active.
- Single FCM-20 modules (e.g. spares in stock) cannot be uploaded with the supplied WECS-9520 software update tool individually. In this case see Chapter 4.
- Do not disconnect the USB-to-CAN adapter from the flexView PC while the update is running, see Appendix 1.

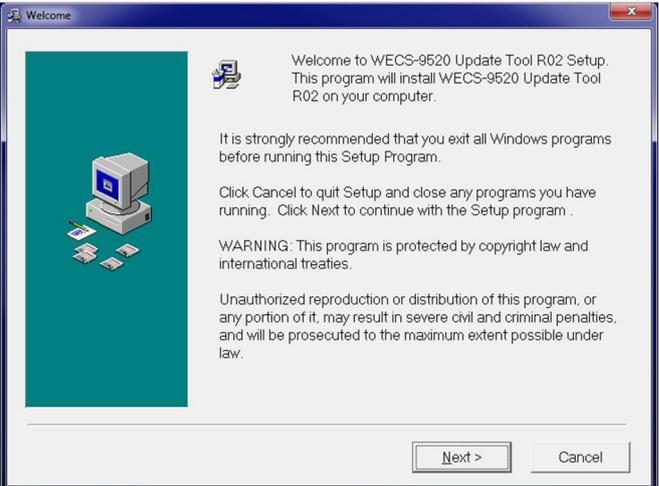
NOTE:

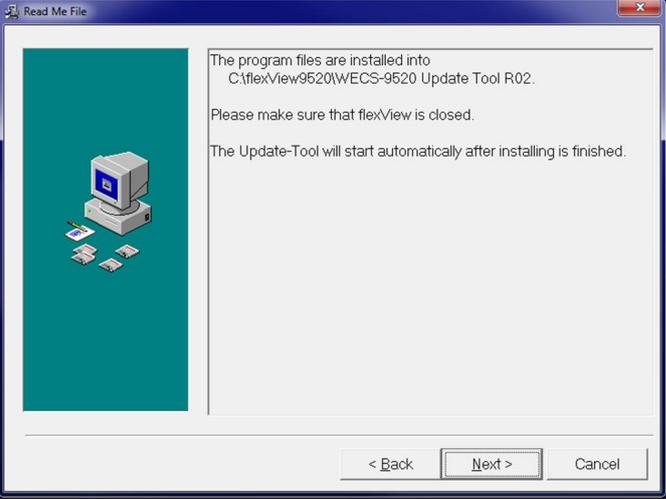
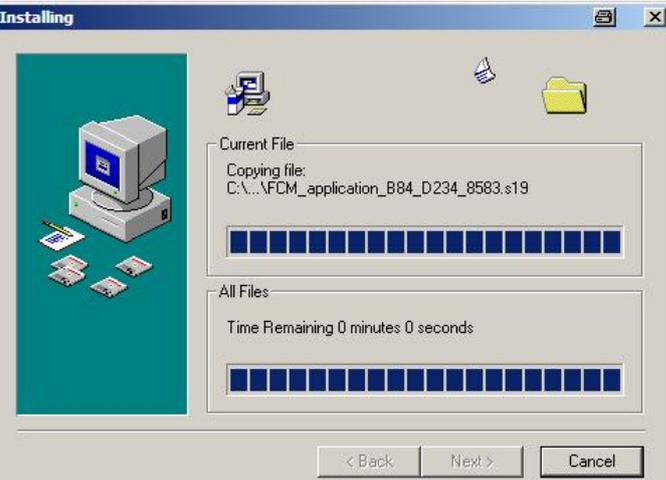
The WECS-9520 software update can be performed several times without any negative effect.

5.1 Download of the WECS-9520 software update tool from www.wartsila.com

1. Download the update file “WECS-9520_SW_update_02.zip” from <http://www.wartsila.com/products/marine-oil-gas/engines-generating-sets/low-speed-rt-flex-engines>.
See also the information in the Technical Bulletin RT-191, Chapter 3, where to find and how to download the zip file.
2. Unzip the content to any folder on the flexView PC.
NOTE: Close the flexView program first if it is running.
3. Double click “Install WECS-9520 Update Tool R02.exe” in order to start the installation process.
If necessary, check the appropriate Windows access rights on the flexView PC.

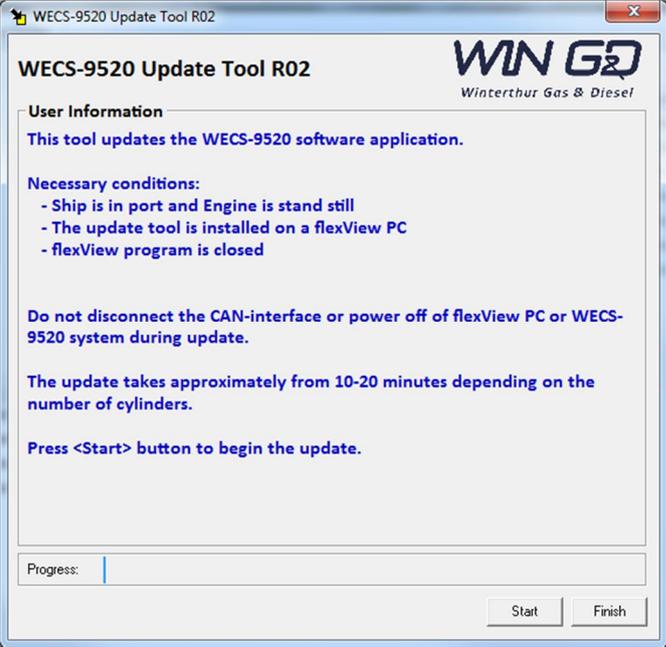
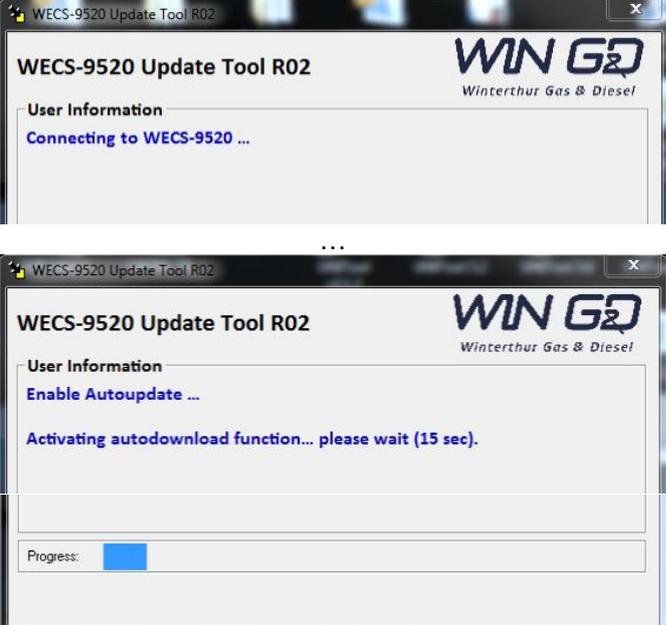
Table 3, Step by step download procedure

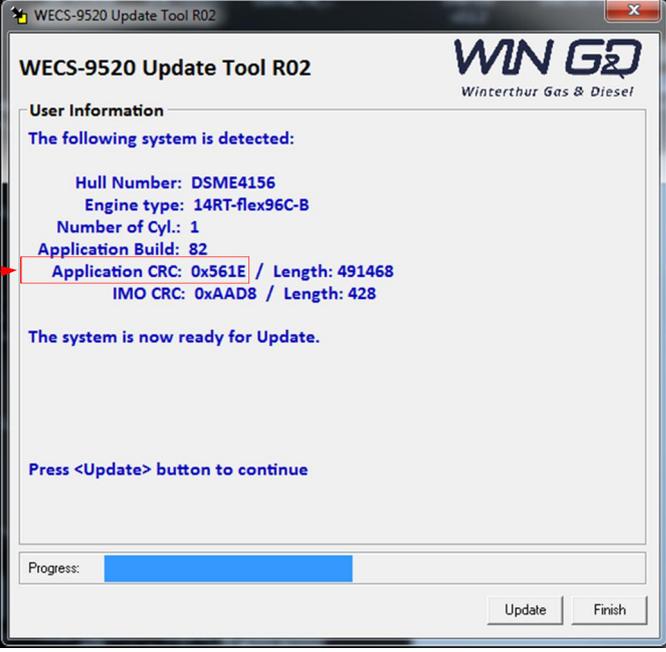
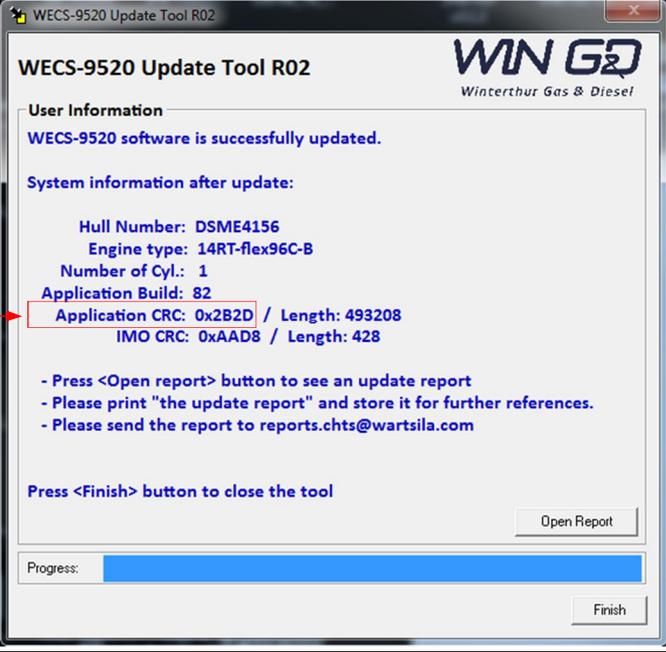
Comment	Window picture (example)
<p>Read the information on the screen before you proceed.</p> <p>è Click “Next >” button to continue</p>	

Comment, Table 3 continued	Window picture (example)
<p>The program files are installed in the folder: C:\flexView9520\ WECS-9520 Update Tool R02</p> <p>NOTE: The flexView program must be closed before the installation is started.</p> <p>è Click “Next >” button to continue</p>	 <p>The screenshot shows a 'Read Me File' dialog box with a teal background on the left containing a computer icon and floppy disks. The text on the right states: 'The program files are installed into C:\flexView9520\WECS-9520 Update Tool R02. Please make sure that flexView is closed. The Update-Tool will start automatically after installing is finished.' At the bottom are buttons for '< Back', 'Next >', and 'Cancel'.</p>
<p>The data are extracted and filed.</p> <p>The update tool will start automatically.</p> <p>Additionally, a shortcut icon will be created on the desktop so that the WECS-9520 software update procedure can be easily launched again if necessary.</p> <p>After the successful WECS-9520 software update the shortcut icon on the desktop can be deleted.</p>	 <p>The screenshot shows an 'Installing' progress dialog box. It features a teal background on the left with a computer icon and floppy disks. On the right, it displays 'Current File' as 'Copying file: C:\...\FCM_application_B84_D234_9583.s19' with a progress bar. Below that, it shows 'All Files' with a progress bar and 'Time Remaining 0 minutes 0 seconds'. At the bottom are buttons for '< Back', 'Next >', and 'Cancel'.</p>

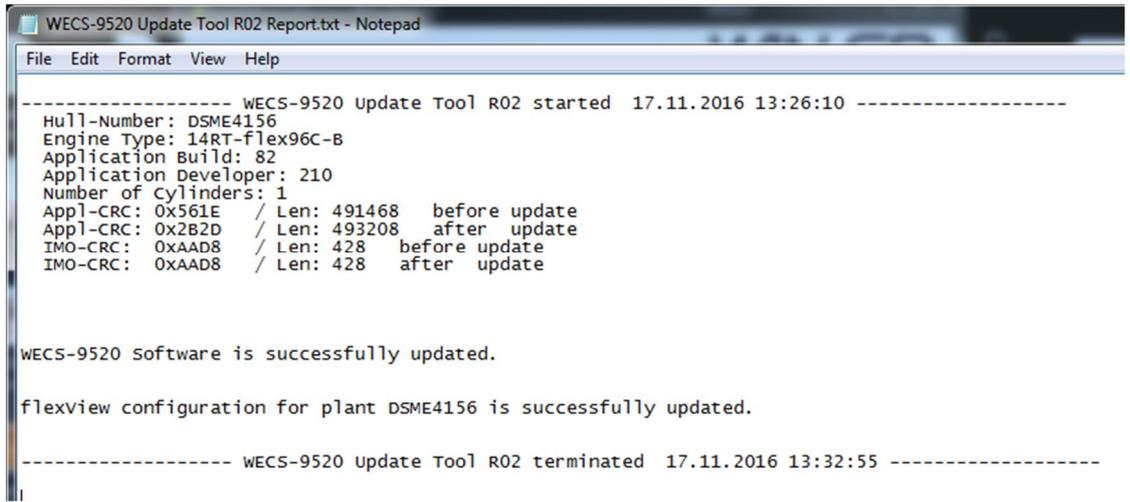
5.2 WECS-9520 software update procedure

Table 4, Step by step update procedure

Comment	Window picture (example)
<p>After the installation this window picture will appear.</p> <p>Please read the listed content before you proceed.</p> <p>è Click “Start” button</p>	 <p>The screenshot shows the 'WECS-9520 Update Tool R02' window. It features the 'WIN G2 Winterthur Gas & Diesel' logo in the top right. Under 'User Information', it states: 'This tool updates the WECS-9520 software application.' Below this, 'Necessary conditions' are listed: '- Ship is in port and Engine is stand still', '- The update tool is installed on a flexView PC', and '- flexView program is closed'. A warning states: 'Do not disconnect the CAN-interface or power off of flexView PC or WECS-9520 system during update.' It also notes: 'The update takes approximately from 10-20 minutes depending on the number of cylinders.' At the bottom, it says 'Press <Start> button to begin the update.' There is a 'Progress:' bar and 'Start' and 'Finish' buttons.</p>
<p>The update tool is connecting to the installation and is reading out the data from WECS-9520.</p>	 <p>The first screenshot shows the 'User Information' section with the text 'Connecting to WECS-9520 ...'. The second screenshot shows 'Enable Autoupdate ...' and 'Activating autoupdate function... please wait (15 sec)'. Both screenshots include a 'Progress:' bar with a blue indicator.</p>

Comment, Table 4 continued	Window picture (example)
<p>The installation's specific data are listed.</p> <p>NOTE: The effective WECS-9520 software update will start by clicking the update button.</p> <p>See information in Table 2 about the Application CRC value.</p> <p>⇒ Click “Update” button</p>	 <p>The screenshot shows the 'WECS-9520 Update Tool R02' window. It displays 'User Information' and 'The following system is detected:' with the following details: Hull Number: DSME4156, Engine type: 14RT-flex96C-B, Number of Cyl.: 1, Application Build: 82, Application CRC: 0x561E / Length: 491468, and IMO CRC: 0xAAD8 / Length: 428. Below this, it states 'The system is now ready for Update.' and 'Press <Update> button to continue'. At the bottom, there is a progress bar and 'Update' and 'Finish' buttons. A red box highlights the Application CRC value, with a red arrow pointing to the text in the adjacent comment cell.</p>
<p>The installation's software has been updated. The application CRC has changed accordingly.</p> <p>NOTE: All WECS-9520 parameter settings and all functions remain the same.</p> <p>See information in Table 2 about the Application CRC value.</p> <p>⇒ Click “Open Report” button. Print and save the report, see example in Figure 2.</p> <p>⇒ Click “Finish” button</p>	 <p>The screenshot shows the 'WECS-9520 Update Tool R02' window after the update. It displays 'User Information' and 'WECS-9520 software is successfully updated.' Below this, it shows 'System information after update:' with the following details: Hull Number: DSME4156, Engine type: 14RT-flex96C-B, Number of Cyl.: 1, Application Build: 82, Application CRC: 0x2B2D / Length: 493208, and IMO CRC: 0xAAD8 / Length: 428. Below this, it provides instructions: '- Press <Open report> button to see an update report', '- Please print "the update report" and store it for further references.', and '- Please send the report to reports.chts@wartsila.com'. At the bottom, it says 'Press <Finish> button to close the tool'. There is a progress bar, an 'Open Report' button, and a 'Finish' button. A red box highlights the new Application CRC value, with a red arrow pointing to the text in the adjacent comment cell.</p>

- Power off the complete WECS-9520 in the E85 box, wait for a minute and power on again.



```
----- WECS-9520 Update Tool R02 started 17.11.2016 13:26:10 -----
Hull-Number: DSME4156
Engine Type: 14RT-flex96C-B
Application Build: 82
Application Developer: 210
Number of cylinders: 1
Appl-CRC: 0x561E / Len: 491468 before update
Appl-CRC: 0x2B2D / Len: 493208 after update
IMO-CRC: 0xAAD8 / Len: 428 before update
IMO-CRC: 0xAAD8 / Len: 428 after update

WECS-9520 Software is successfully updated.

flexview configuration for plant DSME4156 is successfully updated.

----- WECS-9520 Update Tool R02 terminated 17.11.2016 13:32:55 -----
```

Figure 2, Example of a report

NOTE:

When the WECS-9520 software update is successfully done it is not necessary to run it again. It is permanently stored in the FCM-20 modules.

6 Finalising the report

1. Repeat the update procedure on the spare FCM-20 modules as described in Appendix 2. This ensures that all spare FCM-20 modules will be equipped with the latest installation's specific software.
2. Print the report as explained in Table 4 and example shown in Figure 2.
3. Send the report (as in Figure 2) to:
reports.chts@wartsila.com

7 Appendix

1. Troubleshooting (Appendix 1)
2. Software auto-download to online spare FCM-20 Module (Appendix 2)
3. Instruction for flexView base and communication drivers installation (Appendix 3)
4. Wiring Diagram "flexView Operator" (Appendix 4)

8 Contacts

8.1 How to contact Wärtsilä

For questions about the content of this Instructions bulletin, or if you need Wärtsilä assistance, services, spare parts and/or tools, please contact your nearest Wärtsilä representative.

8.2 Contact details for emergency issues

8.2.1 Operational support

For questions concerning operational issues, please send your enquiry to:
technicalsupport.chts@wartsila.com
or phone 24hrs support: +41 52 262 80 10.

8.2.2 Field service

If you need Wärtsilä Field Service, please send your enquiry to:
Ch.Fieldservice@wartsila.com
or phone 24hrs support: +41 79 255 68 80.

8.2.3 Spare parts

If you need Wärtsilä spare parts and/or tools, please contact your nearest Wärtsilä representative or your key account manager.

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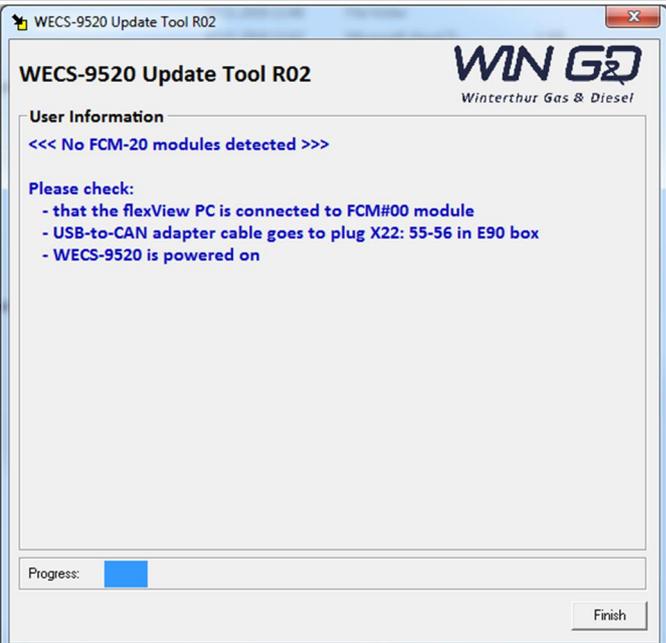
Troubleshooting

There might be situations where one or a couple of modules are not updated due to various reasons. They are described in the following chapters.

Generic troubleshooting tips and work procedures are listed in order to sort out problems.

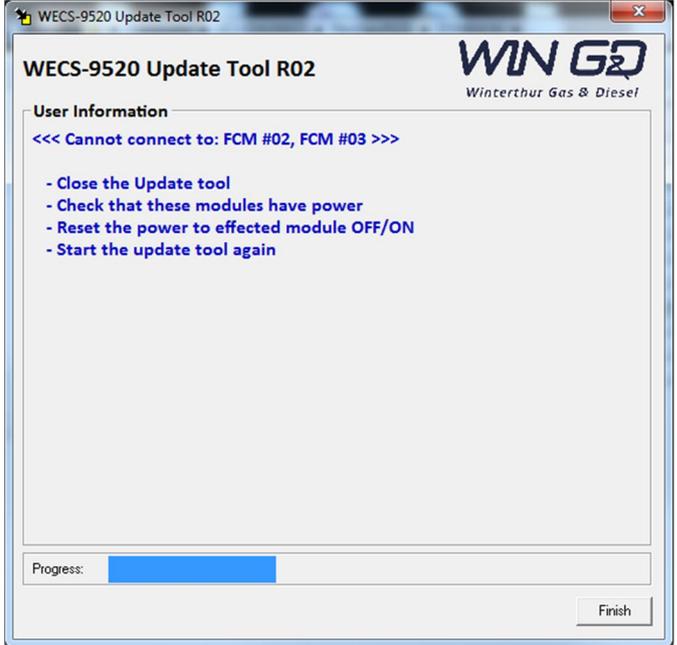
1 Online spare module FCM-20#00 cannot be updated

Table 1, Update of FCM-20 module failed

Comment	Window picture (example)
<p>Incident: <i>WECS-9520 cannot be connected.</i> or <i>No FCM-20 module detected.</i></p> <p>Possible reasons:</p> <ul style="list-style-type: none"> • The module was switched off during the software download. • Bad or broken CAN-communication between the flexView PC and WECS-9520. <p>Countermeasures:</p> <ul style="list-style-type: none"> • Check the CAN-bus line from the flexView PC to the WECS-9520 for bad contacts, missing or broken terminal resistors at the ends of the line or other disturbances. • Restart the flexView PC. • Check that the “USB” LED on the USB-to-CAN adapter which is connected to the flexView PC is green. • Power off the complete WECS-9520 in the E85 box, wait for 1 minute and power on. • Restart the WECS-9520 update tool by clicking the icon on the desktop. <div data-bbox="520 1641 635 1760" style="text-align: center;">  </div>	<div data-bbox="815 674 1481 1317">  <p>WECS-9520 Update Tool R02</p> <p>WIN G2 Winterthur Gas & Diesel</p> <p>User Information</p> <p><<< No FCM-20 modules detected >>></p> <p>Please check:</p> <ul style="list-style-type: none"> - that the flexView PC is connected to FCM#00 module - USB-to-CAN adapter cable goes to plug X22: 55-56 in E90 box - WECS-9520 is powered on <p>Progress: </p> <p style="text-align: right;">Finish</p> </div> <div data-bbox="815 1323 1481 1977">  <p>WECS-9520 Update Tool R02</p> <p>WIN G2 Winterthur Gas & Diesel</p> <p>User Information</p> <p><<< Download to online spare FCM-20#00 failed >>></p> <ul style="list-style-type: none"> - Close the update tool. - Please reset all modules by power off/on. - Start the update tool and try again. <p>Progress: </p> <p style="text-align: right;">Finish</p> </div>

2 Some of the FCM-20 modules cannot be detected

Table 2, FCM-20 module detection failure

Comment	Window picture (example)
<p>Incident: One or several FCM-20 modules cannot be connected.</p> <p>Possible reasons:</p> <ul style="list-style-type: none"> • The affected FCM-20 modules have no power. • CAN S-Bus cables between the FCM-20 modules are disconnected or broken. <p>Countermeasures:</p> <ul style="list-style-type: none"> • Check that all FCM-20 modules are powered. • Check for broken or disconnected cables and/or plugs. • Power off the complete WECS-9520 in the E85 box, wait for 1 minute and power on. • Restart the WECS-9520 update tool by clicking the icon on the desktop. <div data-bbox="517 1178 633 1296" data-label="Image">  </div>	<div data-bbox="810 450 1487 1095" data-label="Image">  </div>

3 Some of the FCM-20 modules are not updated

Incident:

One or several FCM-20 modules are not updated.

Possible reasons:

- The power supply to the affected FCM-20 modules was interrupted during the download, e.g. the power to some FCM-20 modules was switched off while the software update was running.
- The flexView PC failed.

1.3.1 Countermeasures 1 to 3

Table 3, Countermeasure 1

Comment
<p>If the download was interrupted right after the update of the online spare FCM-20#00 module located in the Shipyard Interface Box E90:</p> <ul style="list-style-type: none"> · Close the WECS-9520 update tool. · Power off the complete WECS-9520 in the E85 box, wait for 1 minute and <u>power on</u>. · Wait for about 5 to 10 minutes. The online spare FCM-20 module will be recovered by the WECS-9520 system automatically, see also Appendix 2 to Instructions I-28. During this phase, WECS-9520 will repair the online spare FCM-20 module. WECS-9520 copies the installation specific software back to the FCM-20#00 module. · Restart the WECS-9520 update tool by clicking the icon on the desktop: <div style="text-align: center;">  </div>

Table 4, Countermeasure 2

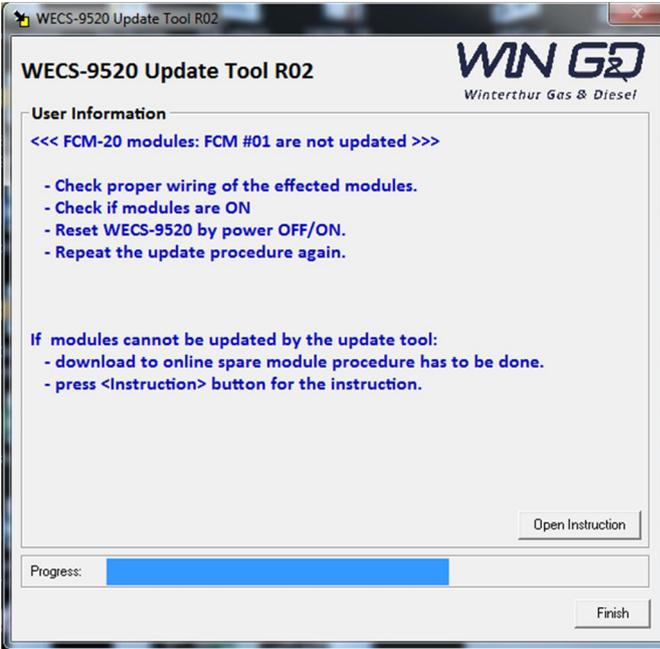
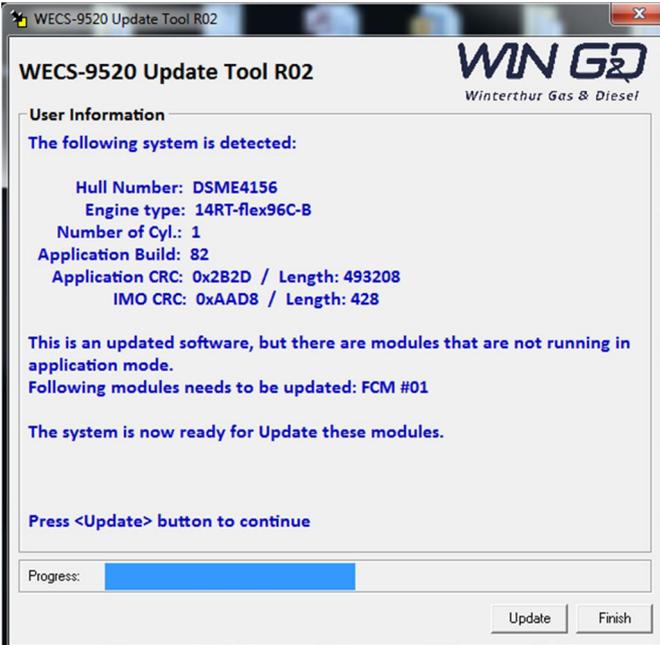
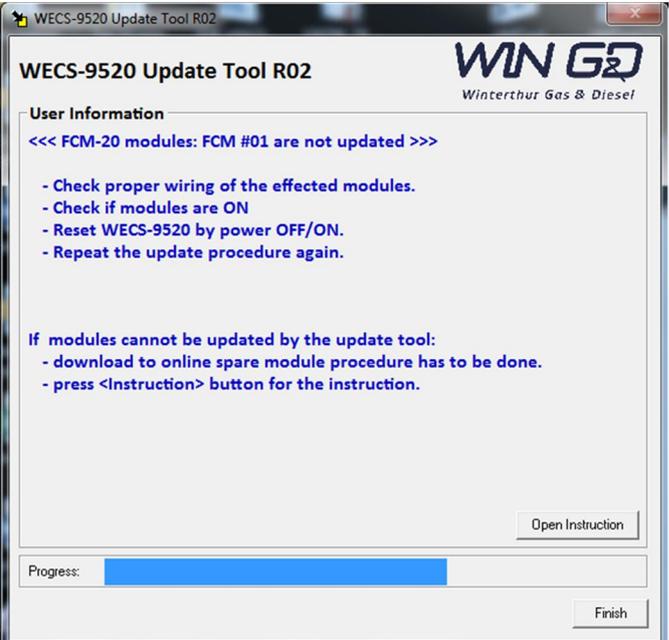
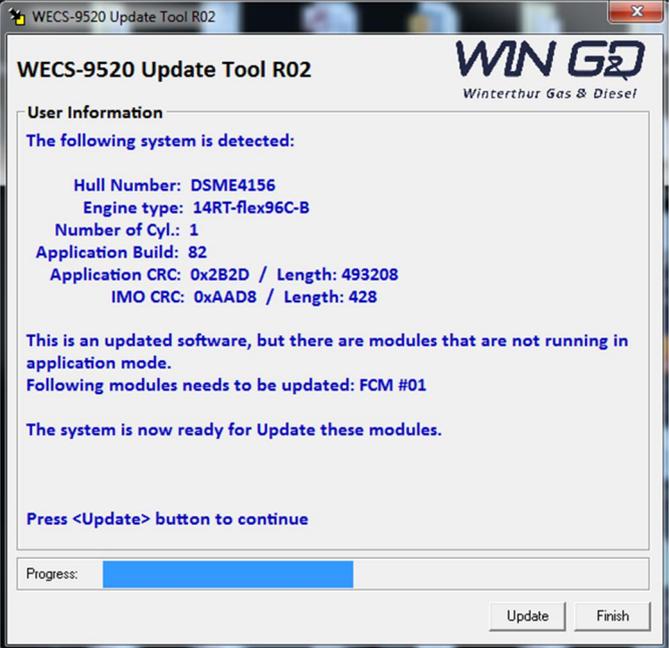
Comment	Window picture (example)
<p>If the download was interrupted when the majority of the cylinder unit FCM-20 modules had already been updated:</p> <ul style="list-style-type: none"> • Check the reason of the interruption and fix it before doing the next trial. • Power off the complete WECS-9520 in the E85 box, wait for 1 minute and power on. • Restart the flexView PC. 	
<ul style="list-style-type: none"> • Restart the WECS-9520 update tool by clicking the icon on the desktop and follow the instructions on the screen. <div data-bbox="525 1216 641 1339" data-label="Image">  </div> <ul style="list-style-type: none"> • The WECS-9520 update tool identifies the FCM-20 modules which have not been updated and will only update those. <p>è Click “Update” button.</p>	

Table 5, Countermeasure 3

Comment	Window picture (example)
<p>If the download was interrupted when only the minority of the cylinder unit FCM-20 modules were already updated:</p> <ul style="list-style-type: none"> • Check the reason of the interruption and fix it before doing the next trial. • Power off the complete WECS-9520 in the E85 box, wait for 1 minute and power on. • Restart the flexView PC. • Restart the WECS-9520 update tool by clicking the icon on the desktop: 	
<ul style="list-style-type: none"> • NOTE: Do not click "Update" button è Click "Finish". • Note the numbers of the modules which need to be updated. • Click "Finish" button on the WECS-9520 update tool. • Switch off the WECS-9520 in the E85 box. • Switch on all FCM-20 modules except the mentioned FCM-20 modules in the above print screen, in this example "FCM #01". • Wait for about 5 to 10 minutes. The online spare module will be recovered by the WECS-9520 system automatically, see also Appendix 2 of Instructions I-28. • Power off, wait for 1 minute and power on complete WECS-9520 (all modules) in the E85 box again. • Restart the WECS-9520 update tool by clicking the icon on the desktop:  <p>The update procedure can be repeated by following the instructions on the screen.</p>	

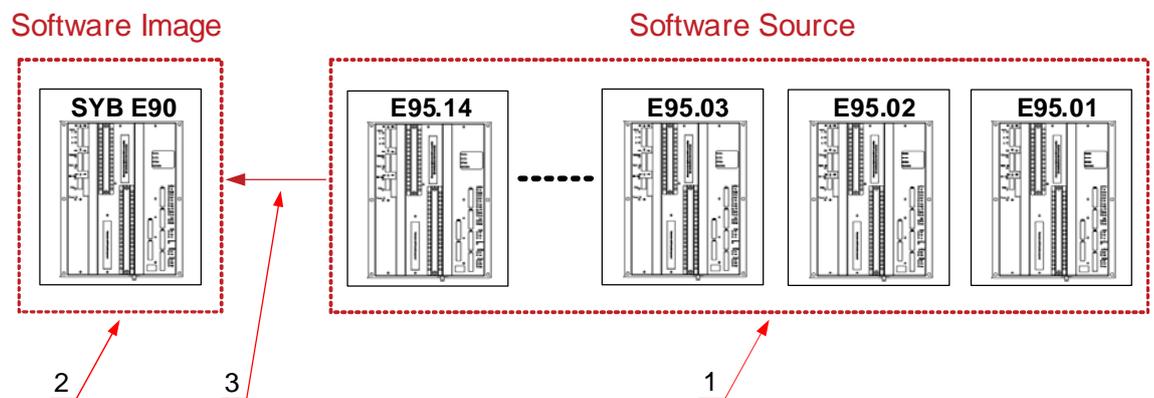
Instructions for software auto-download to online spare FCM-20 module

1 Concept

The auto-download software function allows to copy the current installation specific WECS-9520 software to the online spare FCM-20 module. When the function is triggered, WECS-9520 reproduces the content of the software to the online spare module, which is located in the Shipyard's Interface Box (SYB) E90.

When a module located in the E95 cabinet needs to be replaced, the spare FCM-20 module loaded with the latest software can be taken as replacement.

The concept of the auto-download function is shown in Figure 1.

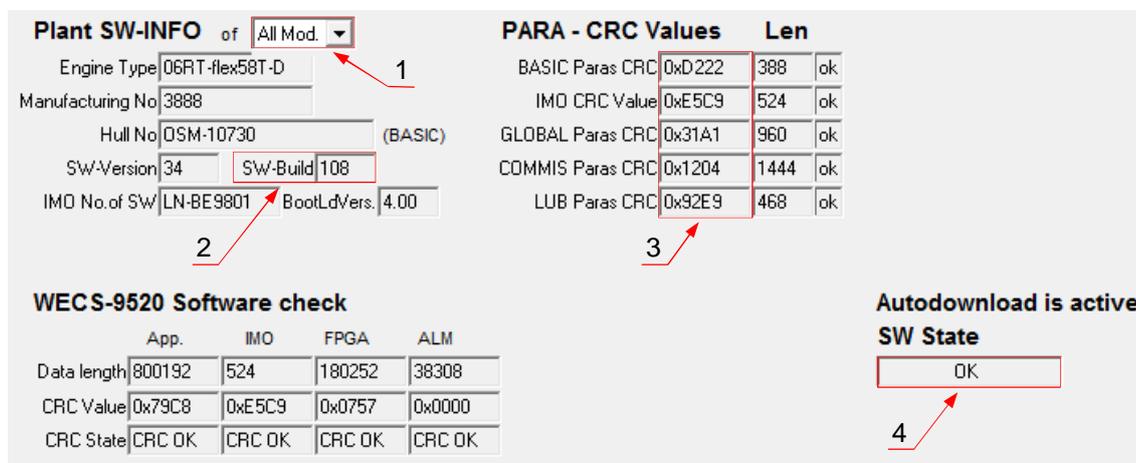


1. FCM-20 modules at the rail unit
(actual number of FCM-20 modules depending on the number of cylinders)
2. FCM-20 module in Shipyard's Interface Box E90
3. Data flow

Figure 1, WECS-9520 located at the rail unit

2 Preparation

- Start up the flexView program.
- Assure that all FCM-20 modules contain the same software status. This can be verified on the SW-Info card. Select “All Mod”. Wait around 2 minutes until all values are received from WECS-9520. If the “SW-info” card looks like on the picture below, all modules are up-to-date. No drop-down menus on the fields “**SW Build**” and “**PARA-CRC Values**” are indicated.



Plant SW-INFO of **All Mod.**

Engine Type: 06RT-flex58T-D
 Manufacturing No: 3888
 Hull No: DSM-10730 (BASIC)
 SW-Version: 34 **SW-Build: 108**
 IMO No. of SW: LN-BE9801 BootLdVers: 4.00

PARA - CRC Values

		Len	
BASIC Paras CRC	0xD222	388	ok
IMO CRC Value	0xE5C9	524	ok
GLOBAL Paras CRC	0x31A1	960	ok
COMMIS Paras CRC	0x1204	1444	ok
LUB Paras CRC	0x92E9	468	ok

WECS-9520 Software check

	App.	IMO	FPGA	ALM
Data length	800192	524	180252	38308
CRC Value	0x79C8	0xE5C9	0x0757	0x0000
CRC State	CRC OK	CRC OK	CRC OK	CRC OK

Autodownload is active
SW State

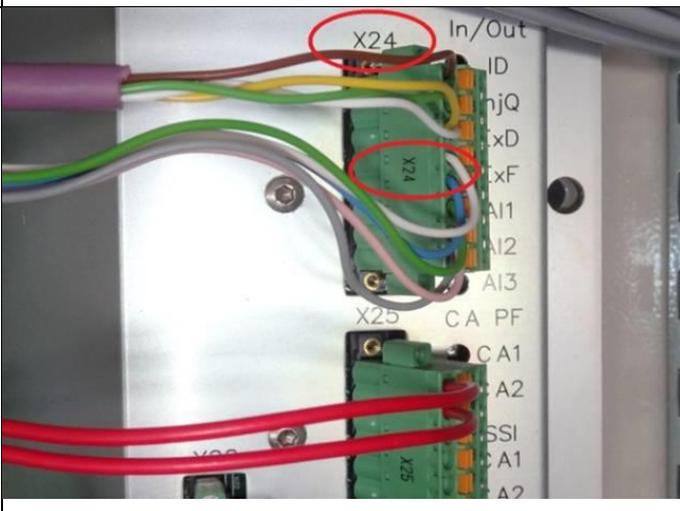
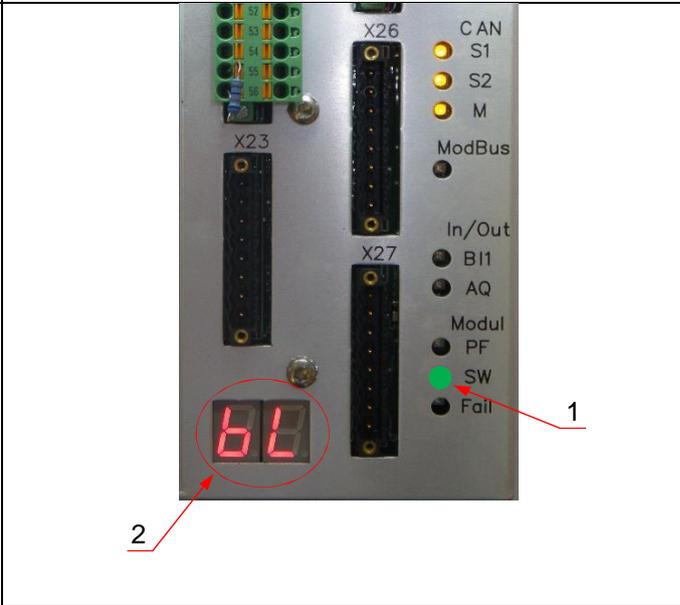
- Select “All Mod.”
- Software build number
- PARA-CRC Values
- Software State

Figure 2, Example of “Plant SW-INFO” page

3 Actions

Table 1, FCM-20 module in SYB E90

Comment	Picture
<ul style="list-style-type: none"> Switch off the power supplies in the E85 box (both power supply breakers) to online spare FCM-20#00 module. Remove the online spare FCM-20#00 located in the SYB E90. 	

Comment, continued	Picture
<ul style="list-style-type: none"> Swap the online spare FCM-20 module with the ship's spare FCM-20 module or with the FCM-20 module that needs a software image. After the module swapping, re-plug all Phoenix connectors and fix cable rails back accordingly. After reconnection verify plug labels with the printing on the metal enclosure of the module. The naming on the plugs must be in accord with the printing on the metal enclosure. 	
<ul style="list-style-type: none"> Switch on the power supply to the module FCM-20#00 in the E85 box (both power supply breakers). Shortly after the module application of FCM-20#00 started up, it will return into the bootloader state, indicated by double blinking of the green SW LED (1). Followed by single blinking of the SW LED (1). Module revisions 06 and 07 will also show an indication code (2) on the display. The auto-download procedure has been launched. The procedure is usually finished after 3 minutes and the green SW LED (1) switches to permanent on. 	
<ul style="list-style-type: none"> The module is now updated and has received an image of the current installation specific WECS-9520 software (backup). The "Plant SW-INFO" card must now look as shown in Figure 2 and explained in Chapter 2. All modules are up-to-date. No drop-down menus on the fields "SW-Build" and "PARA-CRC Values" are indicated. Switch off the power supplies in E85 box (both power supply breakers) to online spare FCM-20#00 module. When the LEDs on the modules are off, unplug all Phoenix connectors and remove the cable rails from the module. If further modules need a software image, follow again the same procedure. Otherwise swap the ship's spare module with the online spare FCM-20 module and switch on the power supplies in E85 box (both power supply breakers). 	

Instruction for flexView base and communication drivers installation

1 flexView interface installation

Each engine with a WECS-9520 control system is delivered with a USB memory stick i.e. *flexView-USB-Stick Contents for WECS-9520*. This memory stick contains the latest software which is needed for the set-up of the engine interface on the Operator PC. It consists of drives for USB-to-CAN adapter, *flexView* installation files, etc.

The content of this memory stick should be updated at the first opportunity e.g. during attendance of a Wärtsilä Service Engineer.

- Double-click on the installation file: *Install-flexView.exe* as shown in Figure 1 below. These files can be found on the *flexView-USB-Stick*.

flexView-USB-Stick Contents for WECS-9520

Name	Date modified	Type	Size
DATA	24.3.2016 9:26	File folder	
AUTORUN.INF	1.4.2011 9:05	Setup Information	1 KB
Install-flexView.EXE	17.2.2016 8:14	Application	74 438 KB
Operator_FlexView_Revision_3_2012-11.pdf	7.11.2012 16:38	PDF Document	5 247 KB
Readme.txt	24.3.2016 9:17	Text Document	2 KB
WARTSILA.ico	1.4.2011 9:05	Icon	1 KB

Fig. 1

- Select **Next** in the following screen:

Installer welcome window



Fig. 2

- Carefully read the “readMe” file and click **Next** again as shown in Figure 3.

ReadMe file window

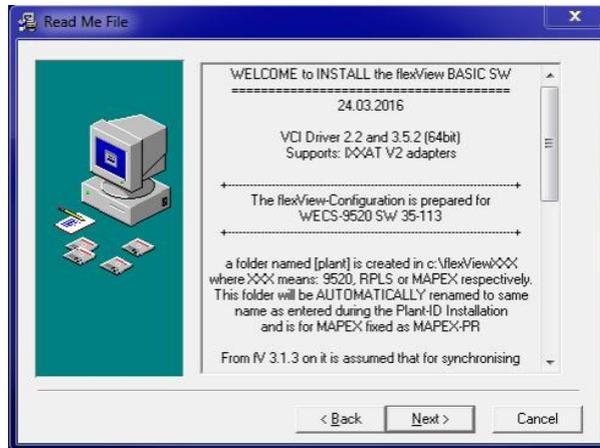


Fig. 3

- In the **Select Components** window select the item according to your requirements.

Select Components window

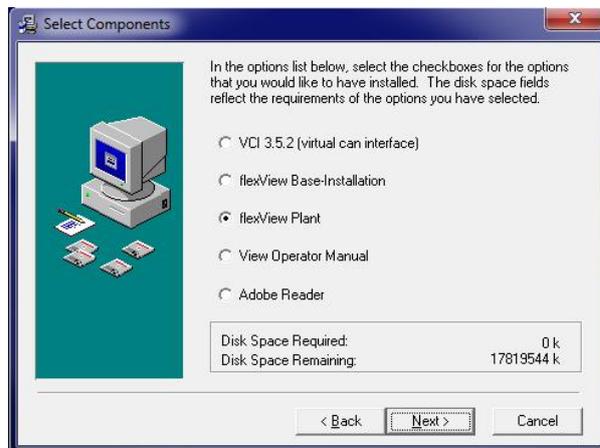


Fig. 4

- For a new installation, it is required to install the **VCI** drivers first (see Chapter 2). Only then, the **flexView Base-Installation** (Chapter 3) can be continued.



Caution!

Do not select the VCI driver installation if they are already installed on your computer, unless you need to reinstall the drivers for repair.

2 Installation of VCI drivers

- ✚ VCI (Virtual CAN Interface) drivers are necessary for the operation of the IXXAT USB-to-CAN adapter.

For a connection to the engine's WECS-9520 system a USB-to-CAN adapter is required (Fig. 5). The connection diagram is described in Appendix 4. It is normally delivered with the RT-flex engine, but it can also be ordered via Wärtsilä Services Sales.

USB-to-CAN adapters

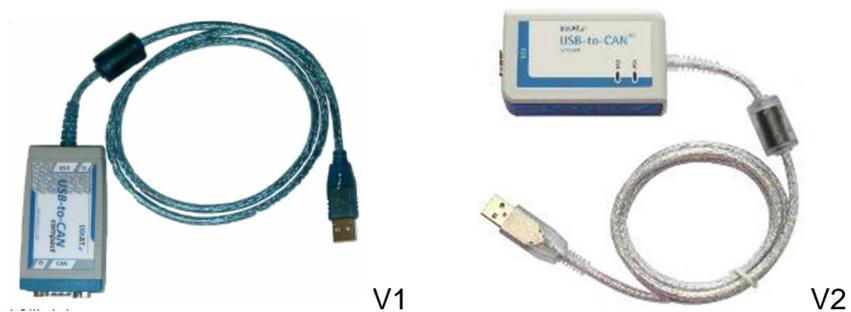


Fig. 5

- Start the *Install-flexView.exe* installation file (see chapter 1).
- Select the **VCI** driver in the **Select Components** window and click **Next** (Fig. 4, Fig. 6).

VCI drive installation selection



Fig. 6



Caution!

The USB-to-CAN adapter must not be connected before the drivers are installed and the PC has been restarted.

- Click **Next** to start copying installation files

The installation program is ready to start the VCI driver setup



Fig. 7

- Click **Next**, after all installation files have been copied

The driver setup files are being copied to your computer

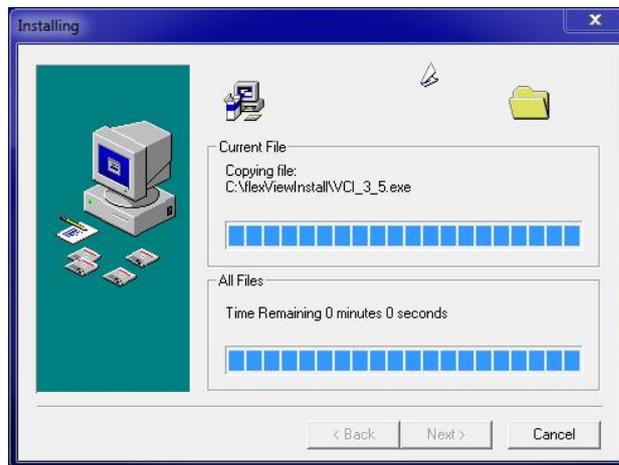


Fig. 8

VCI Installer windows

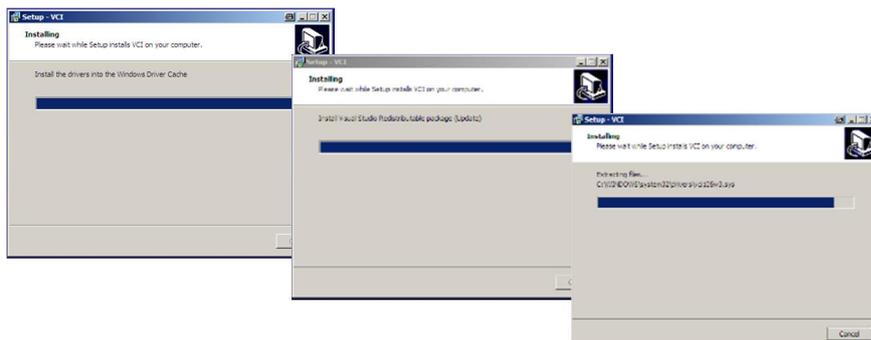


Fig. 9

- Click **Finish** when the installation process is finished.

VCI installation window

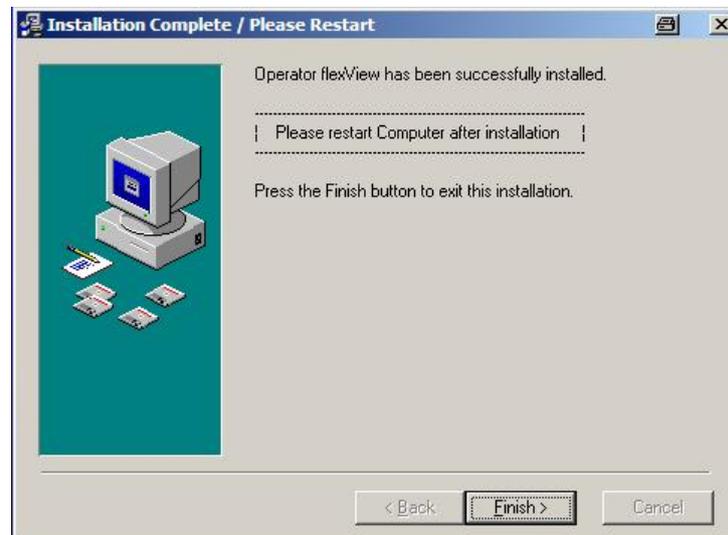


Fig. 10

- Press **OK** to restart

VCI license agreement

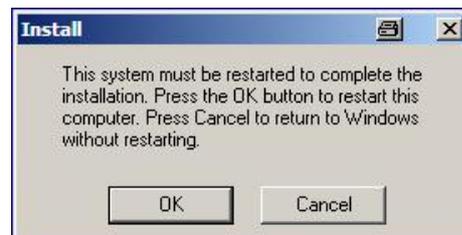
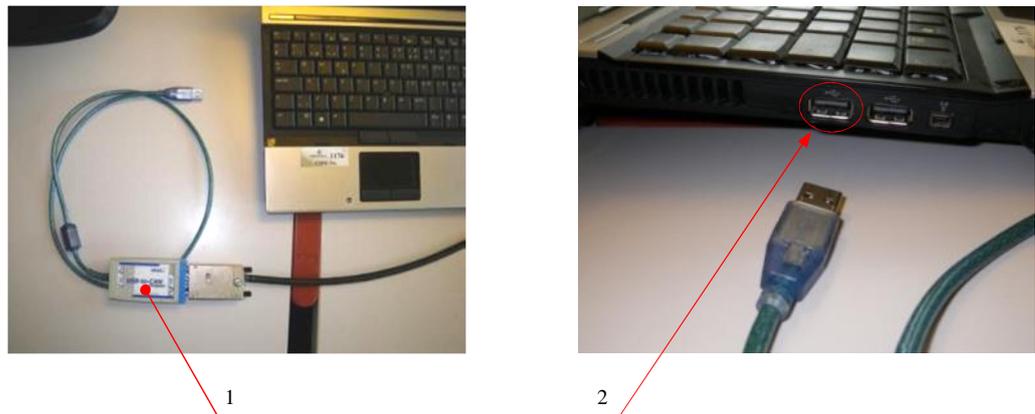


Fig. 11

2.1 Installation of USB-to-CAN adapter

- ✚ After restarting the computer, it is necessary to connect the IXXAT USB-to-CAN adapter to all USB ports one after another. By doing so, the USB ports will be configured to work with the adapter.
- Plug in the IXXAT CAN-to-USB adapter to the USB port of the *flexView* computer:

Plugging in USB-to-CAN adapter



1. USB-to-CAN adapter, 2. USB port on operator flexView PC

Fig. 12

- ✚ MS Windows recognizes the new hardware (i.e. USB-to-CAN adapter) and starts the installation.

Hardware installation

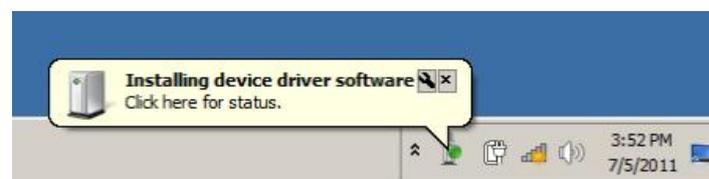


Fig. 13

- ✚ After a successful driver installation the following message will be displayed:

Device driver installation message



Fig. 14



Note:

Connect the USB-to-CAN adapter sequentially to all other USB ports on the computer to complete the driver setup for these ports.

After the successful installation, the “USB” LED on the USB-to-CAN adapter has to be green.

1.1.1 Software driver installation verification

Following procedure helps to check if the installation of the USB-to-CAN adapter on the *flexView* computer with Windows 7 operating system was successful:

- Go to Start Computer Properties menu

Step 1



Fig. 15

- Click on the  [Device Manager](#) link in the following window:

Step 2

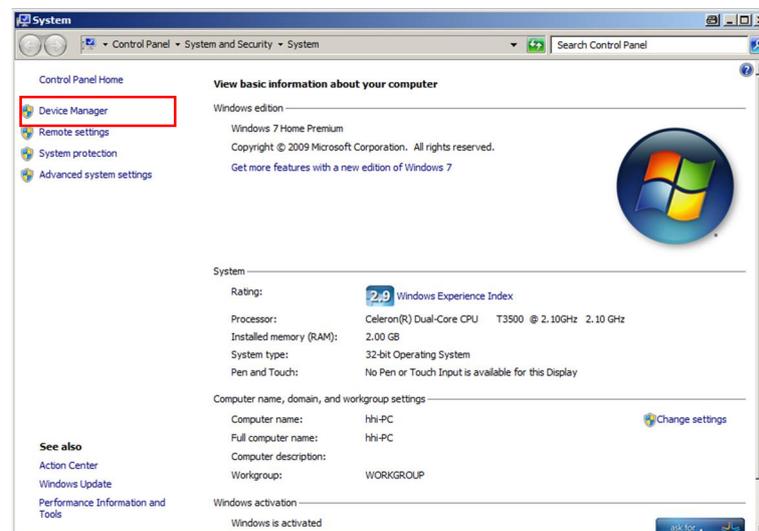


Fig. 16

- In the Device manager window locate the entry  DXXAT VCI V3 Interfaces and open the menu bar by clicking on the plus.
- If the driver has been installed successfully, there will not be any warning signs near the “VCI3 USB-to-CAN compact” entry.

Step 3

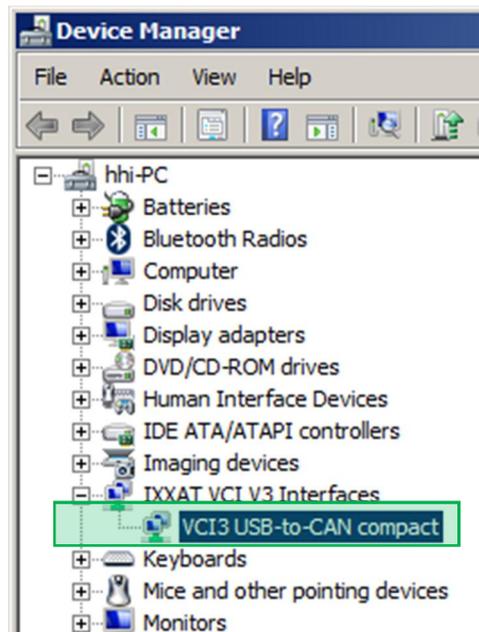


Fig. 17

The correct drivers' version can also be checked here (for Windows XP):

- Go to Start → Control Panel → Add or Remove Programs menu
- Following records should appear (see Fig. 18).

VCI drivers in Windows XP

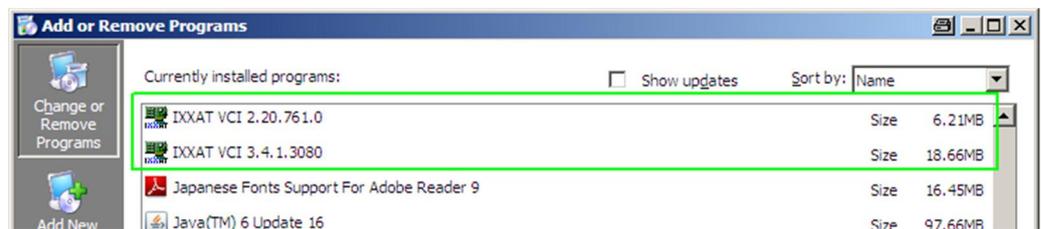


Fig. 18

3 flexView Base-Installation setup

- Start the *flexView installation file* (see chapter 1).
- In the **Select Components** window select **flexView base installation**:

flexView Base installation selection

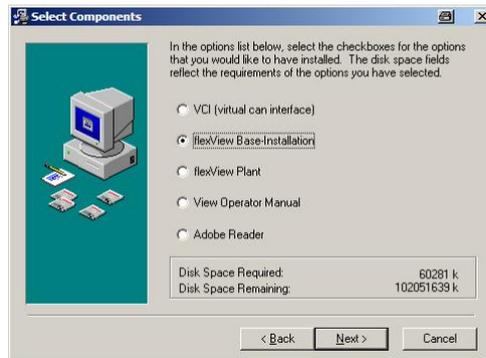


Fig. 19



Caution!

Do not select the VCI driver installation if they are already installed on your computer.

- Select **Next** on the following screen:

Installation window

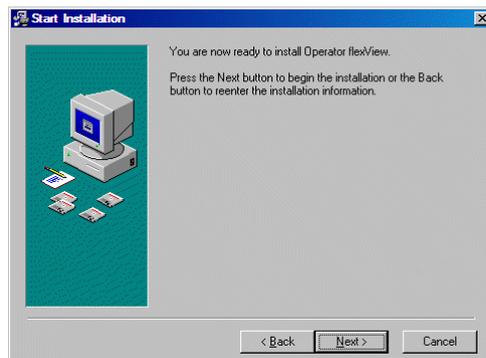


Fig. 20

The new *flexView* program and all necessary system files are installed on the computer.

Installation progress window

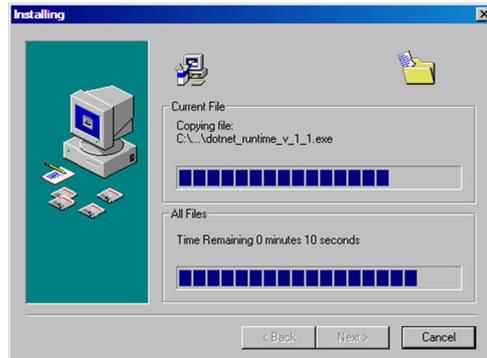


Fig. 21



Note:

It is not necessary to reboot.

MS .NET installation window

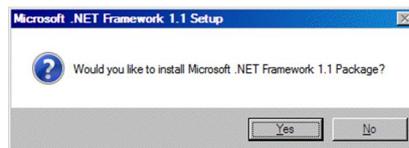


Fig. 22

- Click **Yes**.

MS .NET installation window, License Agreement

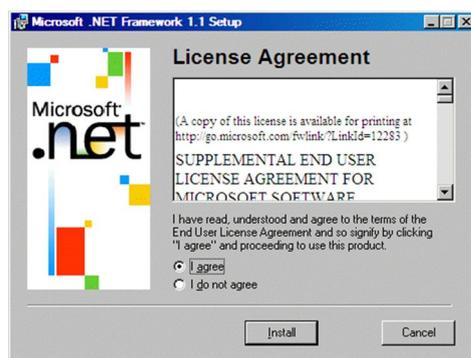


Fig. 23

- Click **Install**.

MS .NET installation progress window

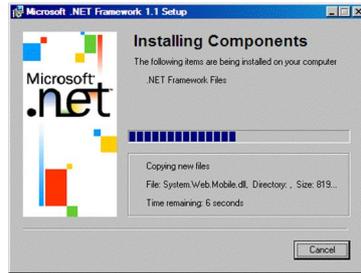


Fig. 24

- Click **OK**.

MS .NET installation complete window



Fig. 25

The *flexView* software is registered in the system configuration.

MS .NET installation window

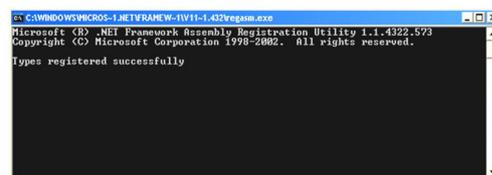


Fig. 26

- Installation completed. Click **Finish**.

Installation window

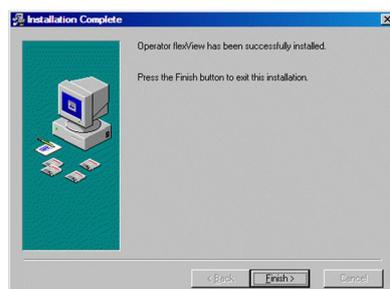


Fig. 27

